1. Safety instructions:

For skilled electricians and instructed personnel in accordance with national legislation, including the relevant standards and, where applicable, in accordance with IEC 79-17 on electrical apparatus for explosive atmospheres. The national safety rules and regulations for prevention of accidents and the following safety instructions which are marked with an ( ) in these operating instructions, will have to be observed!

- The floodlight must not be operated in Zone 0, 1 and 20, 21 hazardous areas!

- The requirements of the EN 61241-0 and -1 regarding excessive dust deposits and temperature are to be considered from the user.

- The technical data indicated on the floodlight are to be observed!

- Changes of the design and modifications to the floodlight are not permitted!

- The floodlight shall be operated as intended and only in undamaged and perfect condition!

- Only genuine Cooper Crouse-Hinds(CCH) spare parts may be used for replacement!

- Avoid short time switch on / switch off mode.

- Repairs that affect the explosion protection (see national standard), may only be carried out by Cooper Crouse-Hinds or a qualified “electrician” and will subsequently have to be checked by an “expert”!

- Do not keep these operating instructions inside the light fitting during operation!

2. Conformity with standards

The floodlight is to conform to the standards specified in the EC-Declaration of conformity. It has been designed, manufactured and tested according to the DIN EN ISO 9001. 94/9 EC: Equipment and protective systems intended for use in potentially explosive atmospheres.

The floodlight fulfills further requirements such as those of the EC directive on electromagnetic compatibility (2004/108/EG).

The floodlights are intended for use in potentially explosive atmospheres in Zones 2 and 22 in accordance with IEC 60079-10.

3. Technical data:

Category of application 94/9/EG:
II 3 G Ex nR II T*
II 3 D Ex tD A22 IP66 T*
* see table on page 4

EC type examination certificate:
PTB 00 ATEX 2214

Type of lamps and thermal class:
- High-pressure mercury
  NFMV H 25 250 W HME
  NFMV H 40 400 W HME
- High-pressure sodium
  NFMV S 15 150 W HSE / HIT
  NFMV S 25 250 W HSE / HIT
  NFMV S 40 400 W HSE / HIT
- High-pressure halogen metal-vapor
  NFMV ME 25 250 W HIE / HIT
  NFMV ME 40 400 W HIE / HIT
- Incandescent lamp
  G_20 200 W
  G_30 300 W

Electrical data:
Rated Voltage 230 V, 240 V
AC dep. o. version
Rated frequency 50 Hz, 60 Hz dep. o. v
Rated Lamp power 250 W, 400 W dep. o. version

Degree of protection to EN/IEC 61140: IP 66
Insulation class acc. to EN 60598 / IEC 598I

Permissible ambient temperature:
1) - 25°C...+40°C/+55°C
Perm.storage temperature in original packing: -40 ºC ... +60 ºC

Supply terminals: 6,0 mm² singel or multi-wired
Cable entries metal thread: M25 x 1,5, 1/2'' BSP, 3/4'' BSP, 1/2'' NPT, 3/4'' NPT dep. on Version

Test torque:
Cover screws: 4,5 Nm fixing screws
base bolts: 62 Nm
pivot bolts: 26 Nm

Dimensions: see Dimension drawings

Weight NFMV...
H 25: ca. 16,9 kg
H 40: ca. 18,6 kg
S 15: ca. 20,5 kg
S 25: ca. 20,5 kg
S 40: ca. 22,0 kg
ME 25: ca. 20,5 kg
ME 40: ca. 22,0 kg
G 20: ca. 15,8 kg
G 30: ca. 16,2 kg

1) Intensive sun radiation in areas of high ambient temperatures may cause inadmissable temperature to rise inside of the floodlight. This may result in a decrease in the lifetime of the electronic ballast. Therefore, those luminaires should be switched off during daytime by a photocell control.
4. Installation

The respective national regulations as well as the general rules of engineering which apply to the installation and operation of explosion protected apparatus will have to be observed!

Transport and storage of the luminaire is permitted in original packing and specified position only!

Opening and closing the floodlight
- Loosen all 6 screws in the front of the cover.
- Open the protection glass, be careful.
- Pay special attention when closing the floodlight. Torque cover screws to 4.5 Nm. Taking care that it is in perfect operational state with the purpose of maintaining its original degree of protection.

Installing the floodlight
Installing with ceiling bracket
- Use only the original ceiling bracket.
- Fasten the ceiling bracket reliably to a suitable, load-carrying underground.
- To make final vertical adjustment, loosen the 4 pivot bolts on the floodlight yoke to position floodlight at the desired angle (-30° to +60°).
- Tighten the 4 pivot bolts to 26 Nm. (see Page 1 "Permissible angle of tilt")

Pole mounting
- Only use the appropriate pole adapter.
- Loosen the screw on the terminal compartment and open the cover.
- Fix the pole adapter on the light fitting and the pole. Secure against turning and loosening! (max. torque 62 Nm)

4.1 Cable entries (KLE); blanking plugs
Generally only certified cable entries and blanking plugs may be used.
E.c. type GHG 960 92..P... (PTB 99 ATEX 3128X).
Flexible cables shall be used with trumpet-shaped cable glands or other suitable entries with additional pull relief.
When using cable entries with a degree of protection that is lower than the IP protection of the apparatus (see page 9), the degree of IP protection for the complete unit is reduced.

The relevant mounting directives for cables entries being used shall be observed.
When fitting cable entries, care has to be taken that the sealing inserts are suitable for the cable diameter. In the case of sealing inserts that are cut out, it is necessary to ensure that the insert is properly adapted to the cable diameter.

In order to ensure the required minimum degree of protection, the cable entries shall be tightened down securely.

Overtightening can impair the degree of protection.
Warning: When tightening the cap nut of the metal cable entry (e.g. type E1WF/e), a suitable tool shall be used to safeguard the gland against twisting.

With luminaires with Cooper Crouse-Hinds cable entries of the type GHG960 92..P... it is not necessary to carry out the test for restricted breathing to IEC 60079-15 33.7.1 when putting into operation for the first time.

Should other cable entries be used, then the test for restricted breathing to IEC 60079-15 33.7.1 must be carried out. (see Section 6.1)

Any unused metric COOPER CROUSE-HINDS cable entries shall be sealed with the blanking plug certified for these metric cable entries.

4.2 Electrical connection

Only heat resistant cable according to the data on the type label may be used or the electrical installation.
Connection cable according to the terminal numbering and circuit diagram. (see Fig. 4)

To maintain the explosion protection, conductors shall be connected with special care.

The insulation shall reach up to the terminal. The conductor itself shall not be damaged.

The minimum and maximum conductor cross sections that can be connected shall be observed (see technical data).

All screws and/or nuts of connection terminals, including those not in use, shall be tightened down securely.

4.2.1 Closing the device

Remove all foreign bodies from the device.
Close the floodlight in reverse sequence.
Check that all seals are tight and sound.

In order to ensure the required minimum protection category, torque the cover screws to 4.5 Nm.

Overtightening might impair the pull-relief effect!

4.3 Installing the lamp

Use only lamps indicated in table 1, type and power.
The lamp must be screwed tightly into the lamp holder. Ensure that it is screwed in fully so that no arcs or other inadmissible operating conditions can occur!

Protect the lamp from glass breakage while screwing it in!
4.4 Lamp change

⚠️ Only change lamp when switched off. Wait 15 minutes after switching off the lamp before opening.

Ensure that no explosive atmosphere is present.
- Loose all cover screws.
- Carefully lift the protective glass from the luminaire enclosure.
- Change lamp.
- Ensure that all seals sit correctly when closing.
- Tighten all cover screws. (Over tightening of the screws can damage the threads)
- Carry test to IEC 60079-15 3.7.1 (see section 7.1)

5. Taking into operating

⚠️ Prior to operating, check the floodlight for its proper functioning and installation in compliance with these operating instructions and other applicable regulations!

Only carry out insulation measurements between PE and the external conductor L1 (L, L2, L3) as well as between PE and N.
- Measuring voltage: max. 1 kV AC/DC
- Measuring current: max. 10 mA.

Carry out test to IEC 60079-15 3.7.1 (see section 7.1)

6. Maintenance

⚠️ Observe the national regulations applicable to the maintenance, servicing and test of apparatus for explosive atmospheres e.g IEC 60079-17 as well as the general rules of engineering!

Servicing:
When servicing, in particular, those components that affect the explosion protection, will have to be checked, e.g.:
- Housing and protective bowl for any cracks or damages.
- Gaskets for their perfect condition.
- Terminals and blanking plugs for their firm fit.
- Defective lamps must be replaced immediately.

The interval between maintenance depends upon the ambient conditions and the hours of operation. The suggested interval between lamp changes given by the lamp manufacturer should be followed.

A visual check and the test to IEC 60079-15 33.7.1 (see section 6.1) should be carried out every 6 months.

We recommend a regular maintenance according to an approved preventive maintenance program.

To maintain the light output, clean the protective glass and reflector with a damp cloth or a mild cleaning fluid.

6.1 Test for Restricted Breathing to IEC 60079-15 33.7.1:

This test is to be carried out:
- Installation
- Lamp change
- During the 6 monthly maintenance
- Check the lamp holder for damage
- The lamp must be screwed tightly in to the lamp holder.
- Tighten all cover screws. (Over tightening of the screws can damage the threads)
- Connect test unit to the test point on the luminaire. (see fig. 8)
- The time required for a vacuum from 300Pa (30mm water pressure) to reduce to 150 Pa (15mm water pressure) at constant temperature conditions, may not be less than 80sec. (see Fig. 8)

If the vacuum cannot be maintained for this length of time, then the seals (enclosure, cable entry, …) must be replaced.

After this the test must be repeated.

7. Repairs / Overhaul

Modification

Only original COOPER Crouse-Hinds parts shall be used for carrying out repairs.

⚠️ Before lamp change or dismantling of individual parts, ensure that no explosive atmosphere is present.

Switch off the apparatus before opening or isolate before commencing maintenance! Only use original spare parts.

If the floodlight was previously in operation then wait 15mins. before opening.

⚠️ Repairs that affect the explosion protection may only be carried out by Cooper Crouse-Hinds or by a qualified electrician in compliance with the respective national regulations.

Apparatus modifications or design changes are not permitted.

8. Disposal / Recycling

The respective valid national regulations for waste disposal shall be observed when disposing of apparatus.

The product range is subject to changes and additions.
<table>
<thead>
<tr>
<th>Type</th>
<th>Voltage/Frequency</th>
<th>Lamp Type</th>
<th>Power</th>
<th>Ambient Temperature</th>
<th>Min. Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFMV S_15</td>
<td>230V 50/60 Hz</td>
<td>HS</td>
<td>150W</td>
<td>T4 T115º</td>
<td>70ºC 66ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
<td>HS</td>
<td>150W</td>
<td>T4 T115º</td>
<td>70ºC 67ºC</td>
</tr>
<tr>
<td>NFMV S_25</td>
<td>230V 50/60 Hz</td>
<td>HS</td>
<td>250W</td>
<td>T3 T140º</td>
<td>75ºC 68ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
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<td>74ºC 68ºC</td>
</tr>
<tr>
<td>NFMV ME_25</td>
<td>230V 50/60 Hz</td>
<td>HI</td>
<td>250W</td>
<td>T3 T140º</td>
<td>75ºC 69ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
<td>HI</td>
<td>250W</td>
<td>T3 T140º</td>
<td>74ºC 66ºC</td>
</tr>
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<td>NFMV H_25</td>
<td>230V 50/60 Hz</td>
<td>HME</td>
<td>250W</td>
<td>T3 T145º</td>
<td>75ºC 68ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
<td>HME</td>
<td>250W</td>
<td>T3 T145º</td>
<td>74ºC 68ºC</td>
</tr>
<tr>
<td>NFMV S_40</td>
<td>230V 50/60 Hz</td>
<td>HS</td>
<td>400W</td>
<td>T3 T180º</td>
<td>78ºC 68ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
<td>HS</td>
<td>400W</td>
<td>T3 T180º</td>
<td>80ºC 73ºC</td>
</tr>
<tr>
<td>NFMV ME_40</td>
<td>230V 50/60 Hz</td>
<td>HIT</td>
<td>400W</td>
<td>T3 T180º</td>
<td>83ºC 70ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
<td>HIT</td>
<td>400W</td>
<td>T3 T180º</td>
<td>79ºC 71ºC</td>
</tr>
<tr>
<td>NFMV ME_40</td>
<td>230V 50/60 Hz</td>
<td>HIE</td>
<td>400W</td>
<td>T3 T180º</td>
<td>75ºC 62ºC</td>
</tr>
<tr>
<td></td>
<td>240V 50/60 Hz</td>
<td>HIE</td>
<td>400W</td>
<td>T3 T180º</td>
<td>80ºC 72ºC</td>
</tr>
<tr>
<td>NFMV H_40</td>
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<td>HME</td>
<td>400W</td>
<td>T3 T185º</td>
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<td>240V 50/60 Hz</td>
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<td>400W</td>
<td>T3 T185º</td>
<td>79ºC 73ºC</td>
</tr>
<tr>
<td>NFMV GL_20</td>
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<td>200W</td>
<td>T4 T115º</td>
<td>64ºC 64ºC</td>
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<td>Incandescent</td>
<td>300W</td>
<td>T3 T155º</td>
<td>67ºC 64ºC</td>
</tr>
</tbody>
</table>

* Only for ambient temperature (T<sub>amb</sub>) +45ºC
** Only for ambient temperature (T<sub>amb</sub>) +50ºC